

INCH-POUND

MIL-DTL-16878/8C
11 August 2000
SUPERSEDING
MIL-W-16878/8B(NAVY)
11 September 1992

DETAIL SPECIFICATION SHEET

WIRE, ELECTRICAL,
SILICONE RUBBER INSULATED, 200 °C, 1000 VOLTS

This specification is approved for use by all Departments
and Agencies of the Department of Defense.

The requirements for acquiring the product described herein shall consist of this specification sheet and MIL-DTL-16878G.

REQUIREMENTS.

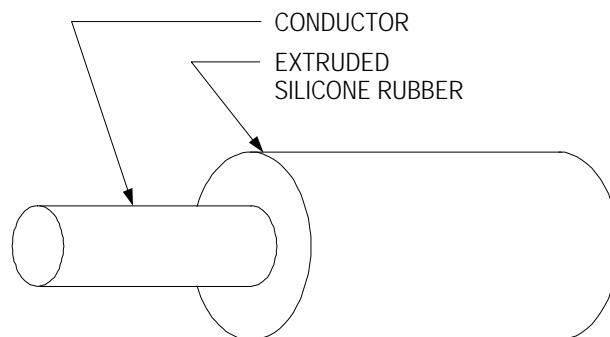
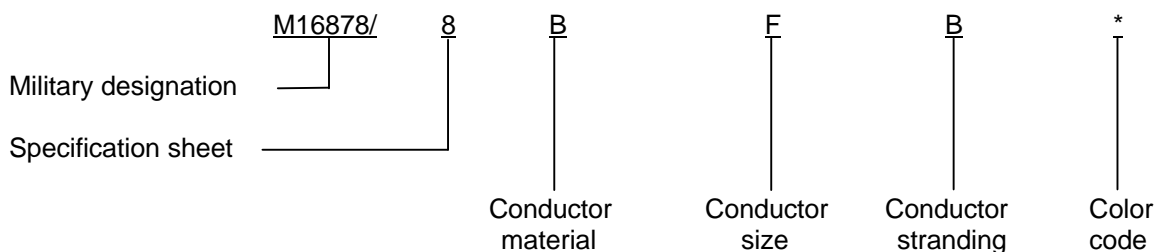


FIGURE 1. Wire configuration.

TABLE I. Wire configuration and dimensions.

PIN ^{1/}	Wire size	Stranding	Conductor		Conductor diameter (nominal) (inch)	Finished wire diameter (inch)	
			Material	Coating		Min	Max
M16878/8BEB*	24	7 X 32	Copper	Silver	.024	.083	.091
M16878/8BFB*	22	7 X 30	Copper	Silver	.030	.089	.097
M16878/8BGB*	20	7 X 28	Copper	Silver	.038	.097	.105
M16878/8BGC*	20	10 X 30	Copper	Silver	.038	.097	.105
M16878/8BHB*	18	7 X 26	Copper	Silver	.048	.107	.115
M16878/8BHD*	18	16 X 30	Copper	Silver	.048	.107	.115
M16878/8BJE*	16	19 X 29	Copper	Silver	.057	.116	.124
M16878/8BJF*	16	26 X 30	Copper	Silver	.057	.116	.124
M16878/8BKE*	14	19 X 27	Copper	Silver	.072	.161	.171
M16878/8BKH*	14	41 X 30	Copper	Silver	.072	.161	.171
M16878/8BLE*	12	19 X 25	Copper	Silver	.091	.180	.190
M16878/8BLJ*	12	65 X 30	Copper	Silver	.091	.180	.190
M16878/8BMG*	10	37 X 26	Copper	Silver	.111	.200	.210
M16878/8BMK*	10	105 X 30	Copper	Silver	.120	.200	.210
M16878/8BNL*	8	133 X 29	Copper	Silver	.169	.281	.307
M16878/8BPL*	6	133 X 27	Copper	Silver	.213	.326	.351
M16878/8BRL*	4	133 X 25	Copper	Silver	.269	.382	.407
M16878/8BSL*	2	133 X 23	Copper	Silver	.335	.448	.473
M16878/8BTN*	1	259 X 25	Copper	Silver	.378	.519	.550
M16878/8BUN*	0	259 X 24	Copper	Silver	.424	.565	.596
M16878/8BWN*	00	259 X 23	Copper	Silver	.477	.618	.649
M16878/8BYN*	000	259 X 22	Copper	Silver	.533	.694	.725
M16878/8BZN*	0000	259 X 21	Copper	Silver	.601	.742	.773

Notes:

^{1/} PIN stands for part or identifying number (see figure 2).FIGURE 2. Example of PIN (see MIL-DTL-16878G).

Configuration and dimensions:	See figure 1 and table I
Operating voltage:	Up to 1000 volts
Operating temperature:	Up to 200 °C
Insulation:	Extruded silicone rubber
Spark test voltage:	5.0 kV
Impulse dielectric test voltage:	8.0 kV or 5.7 kV using the 3.0 kHz spark test
Dielectric withstanding voltage:	3.0 kV
Insulation resistance:	$IR = K \log_{10} D/d$
Where: IR = Minimum insulation resistance in megohms per 1000 feet at 20 °C	
K = 1,000	
D = Maximum average diameter of finished wire	
d = Conductor diameter	
Cold bend:	Condition 4 hours at -55±1 °C (see table II)

TABLE II. Cold bend mandrel sizes.

Wire size	Cold bend mandrel diameter (inches, maximum)
24, 22	1
20 through 12	2
10 through 6	3
4, 2	4.5
1, 0	6
00, 000, 0000	10

Surface resistance:	Not required
Heat resistance:	Condition at 250 °C
Heat aging:	Not required
Insulation tensile strength:	700 pounds force per square inch (minimum)
Insulation elongation:	125 percent (minimum)
Marking and stripe durability:	Not required

CHANGES FROM PREVIOUS ISSUE. Marginal notations are not used in this revision to identify changes with respect to the previous issues due to the extensiveness of the changes.

CONCLUDING MATERIAL

Custodians:
Navy - SH
Air Force - 11
DLA - CC

Preparing activity:
DLA - CC

(Project 6145-2193-005)

Review activity:
Navy - AS